

**ABSTRACT**

A meta-development environment (MDE) allows users to develop and maintain application software systems independently of architectures and to develop and maintain architecture-dependent aspects of application software systems independently of applications. The user provides the MDE with an object model expressed in an object modeling computer language and a set of one or more metaprograms expressed in a computer programming language. The object model represents an application, and the metaprograms reflect a computer system architecture. The meta-machine binds the object model components to the metaprograms to generate a software system operable on that architecture.